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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

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EXAMINER

SENF, BEHROOZ M

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 08/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,261

Applicant(s)

LIENHART, RAINER

Examiner

Behrooz Senfi

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 5,7-10,14-18,24 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,11-13,19-23 and 26-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant amendment cancelled claims 5, 7 – 10, 14 – 18 and 24 - 25 and added new claims 30 – 35.

Response to Arguments

2. Applicant's arguments filed (paper no. 8, dated 5/26/2004) with respect to 102 (e) rejection of claim 1 have been fully considered but they are not persuasive.

Response to remarks

Applicant asserts (paper no. 8, dated 5/26/2004, page 9, lines 3 – 4) that, "Foote does not disclose determining a probability of whether a transition effect is present at a sub-section of the video stream". Examiner respectfully disagrees. Foote '021 produce/ determines the feature vectors of training images (i.e. fig. 3, 308), which infact the feature vector can represent a scene change/transition effect in a video frame as shown (in fig. 3, 308 and abstract, lines 8 – 27).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 - 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Foote et al. (US 2002/0028021).

Regarding claim 1, Foote '021 discloses "method for processing video" (i.e. fig. 2, abstract), comprising; "acquiring a video stream" (i.e. fig. 2), and "dividing the video stream into a plurality of sub-sections, and determine the probability of whether a transition to a separate sub-section is present " (i.e. abstract, lines 22+, page 12, 0136, and page 13, 0146, lines 13 – 14 from the bottom of the page), and "embedding a probability of the transition into the sub-section of video stream" (i.e. fig. 2, col. 4, 0064, lines 12 - 15).

Regarding claim 2, Foote '021 discloses, "determining the probability is performed by a classifier" (i.e. fig. 2, 206).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3, 4, 6, 11 – 13, 19, 21 – 23 and 26 - 29, are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote '021 in view of Wilcox et al. (US 6,072,542).

Regarding claims 6, 13, 23 and 29, Foote '021 discloses "method for processing video and detecting transition in a video stream using classifier" as discussed above (claim 1). Foote '021 fails to explicitly teach, "transition is a dissolve or fade or wipe". However such a features are well known and used as evidenced by Wilcox '542 (i.e. fig. 2, shows dissolve and fade) teaches dissolve/fade transition. Therefore, taking the

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combined teaching of Foote '021 and Wilcox '542 as a whole would make the above limitation obvious to one having ordinary skill in the art.

Regarding claims 3 – 4 and 12, combination of Foote '021 and Wilcox '542 teaches, “classifier is provided fixed size portion of video” (fig. 2, page 1, 0007, lines 1+ of Foote), and “outputting a location and duration of transition in said video stream” (i.e. 0014 of Foote and fig. 7, t4 – t5, of Wilcox).

Regarding claims 11, 27 and 30 – 31, combination of Foote '021 and Wilcox '542 teaches “acquiring a first shot and a second shot” (i.e. col. 3, lines 25 - 45 of Wilcox) and “determining a duration of transition” (i.e. fig. 7, t4 – t5, col. 3, lines 24+ and 35+ of Wilcox) and “generating a video sequence and training a classifier” reads on (col. 5, lines 25 – 29 and cols. 7 – 8, lines 55 – 5 of Wilcox).

Regarding claims 19, and 26, the limitations claimed are substantially similar to claims 1 and 11, therefore the ground for rejecting claims 1 and 11 also applies here. Furthermore, the additional limitation “one or more processors to perform operation” reads on (i.e. fig. 1, of Foote and fig. 8, of Wilcox) and “time series and re-scaling time series” (i.e. figs. 6 – 7, col. 9, lines 47 – 65 of Wilcox).

Regarding claims 20 - 22, combination of Foote '021 and Wilcox '542 teaches, “rescaling the set of time series of the frame based video” (i.e. col. 9, lines 47 – 58, time aligning of Wilcox).

Regarding claim 28, combination of Foote '021 and Wilcox '542 teaches, “segment including shots and shot includes multiple frames”, therefore the presence of

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a transition would be between two frames (one is before the transition and one would be after the transition).

6. Claims 32 – 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote et al. (US 2002/0028021) in view of Szeliski et al. (US 6,636,220).

Regarding claim 32, Foote '021 teaches "method for video segmentation and classification/training classifier" (i.e. fig. 2), and "determining the probability of the feature vector, which in-fact implements the transition effect" (i.e. page 2, sections 0013 – 0014). Foote '021 fails to explicitly teach "transition synthesizer". However such a features are well known and used as evidenced by Szeliski '220 (i.e. fig. 2, abstract, lines 10 – 12) teaches synthesizing the new generated video sequence using identified transitions. Therefore, taking the combined teaching of Foote '021 and Szeliski '220 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to modify the training classifier with a synthesizer as taught by Szeliski '220. Doing so would place the new video sequence in a synthesized order with respect to frames associated with these transitions.

Regarding claims 33 – 34, combination of Foote '021 and Szeliski '220 teach "random video shots" (i.e. fig. 1, 192 of Szeliski) and "transition effect is associated with a duration on a probability" (i.e. page 2, section 0014, 13 – 17).

Regarding claim 35, combination of Foote '021 and Szeliski '220 teach, "classifier module comprises re-scaling a time series of frame-based feature" (i.e. fig. 2, col. 13, lines 30+ analyzer and synthesizer of Szeliski).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314


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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. F.

8/6/2004


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600